Utah Retirement Systems Investment Processes and Performance

May 8, 2013

Culture of the Investment Function

- Beneficiaries come first. We view ourselves as servants of public servants.
- We want to do the right things for the right reason and fulfill our fiduciary duty with the highest degree of integrity.
- We have a team-based approach to making decisions and implementation. We encourage the team to find ways to continuously improve the investment process.
- The capital we look after represents significant sacrifice by the public servants of this state.
  - There is unlikely to be a second chance to re-

Governance Structure and Primary Functions

Utah Retirement Systems

Consultants

- Help Board assess the efficacy of the process
- Provide input to Investment Committee and Investment Team

Board of Directors

6 Independent Directors plus the State Treasurer who determine the principles that govern the investment function

- Set Asset Allocation
- Approve Policy

Internal Audit

Identify potential problems before they happen and ensure they are fixed.

Investment Committee

Led by the Executive Director and Comprised of 7 Full-Time, Senior Employees of URS who Determine how to implement the Asset Allocation

- Hire/Fire Managers
- Approve Procedures
- Make recommendations to Board about Policy and Implementation of the Portfolio

Compliance

Keep everyone safe.

Legal

- Negotiate Contracts with external providers
- Ensure legal contracts do not create unintended risk for the fund.

Investment Team

Led by the Chief Investment Officer and Comprised of 16 Investment Professionals who oversee the day to day functions of the portfolio

- Provide recommendations to the Investment Committee
- Implement the Investment Committee's decisions
- Monitor markets for opportunities
- Manage risk
- Monitor external managers
- Implement Passive Strategies
- Rebalance the Portfolio

Markets are volatile.

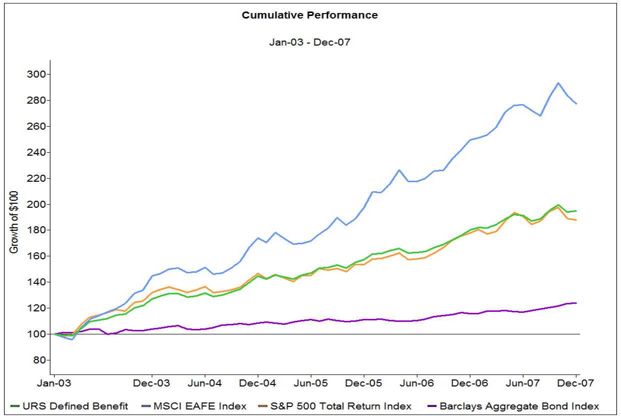
- Within that volatility are cyclical and secular bull and bear markets.
- Bear markets produce challenges but also opportunities.
- Bull markets produce euphoria but also risk due to overvaluations.

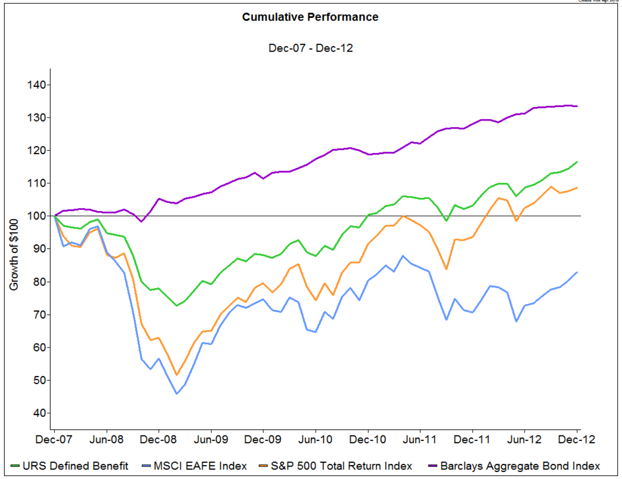
We try to be contrarian in bear markets and cautious in bull markets. This philosophy is managed within the context of a mean/variance model which circumscribes the amount of risk that can be employed to produce a given amount of return.

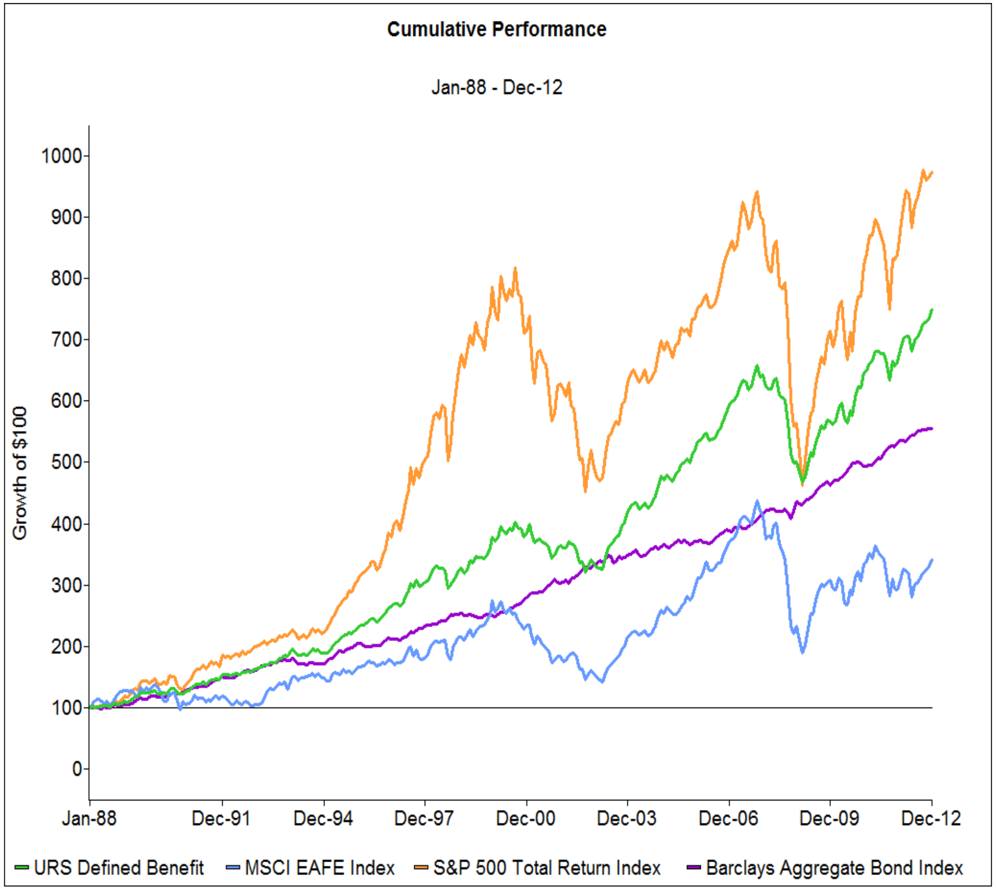
The core of the investment philosophy and process for the pension fund is centered on these beliefs:

- Our goal is to lose as little as possible in down equity markets. This is important in order to compound wealth over the long-run. It is also important to control risk and not to permanently impair capital.
- The portfolio needs to be thoughtfully diversified.
- We have a long time horizon

When evaluating historical investment returns, remember that relative comparisons of "good and bad" are end point sensitive. By that, what we mean is that the date that one chooses to begin and end the analysis can dramatically influence the outcome.

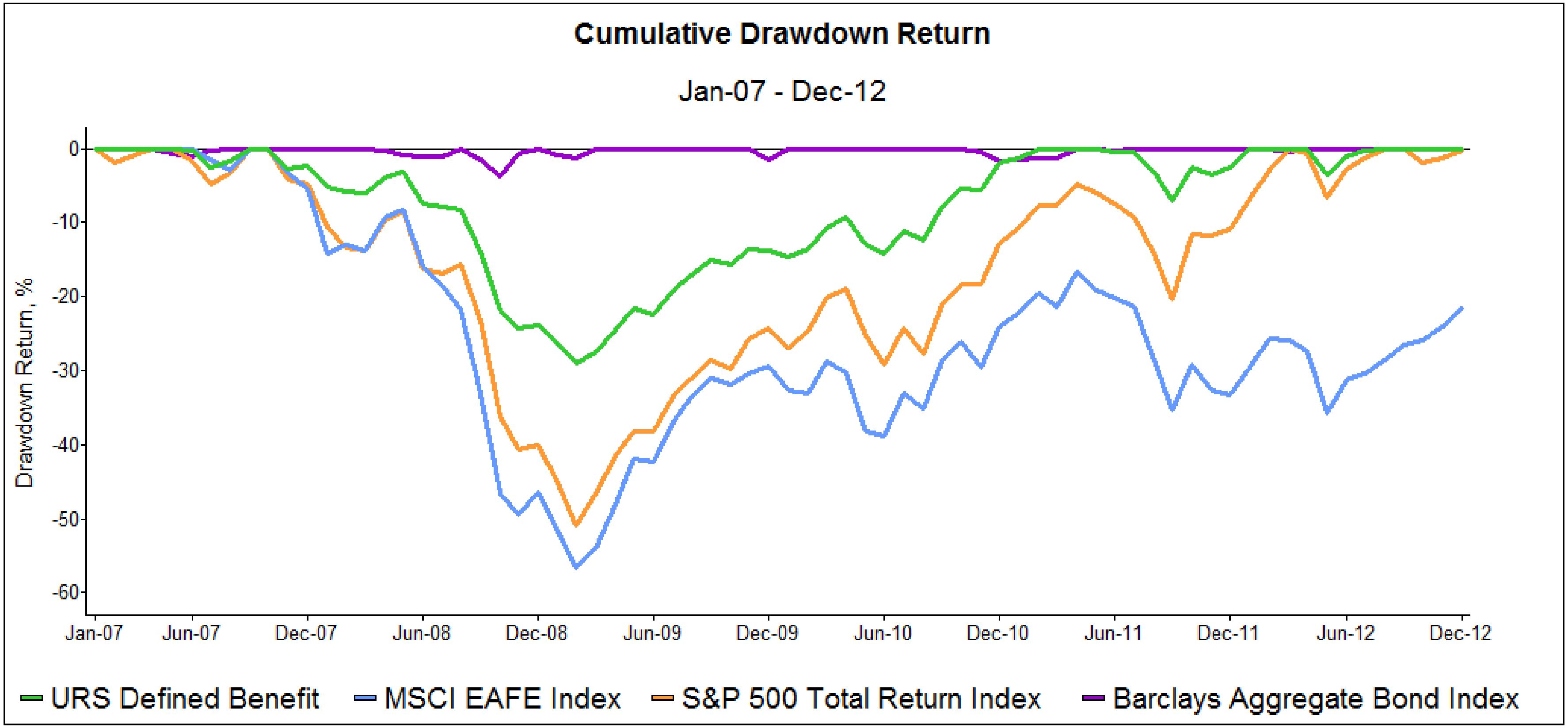






What is a Drawdown?

One of the tools we use for managing the fund is a metric called "Drawdown". In it we look at the cumulative return chart shown on the previous page and measure how much a portfolio loses peak to trough and then how long it takes to get back to the previous peak. You can see that from peak to trough in 2008 the S&P 500 lost over 50%. In order to recover that kind of loss, it requires a 100% return. It took just over 3 years from the bottom to recover the losses. MSCI EAFE has yet to recover its losses.



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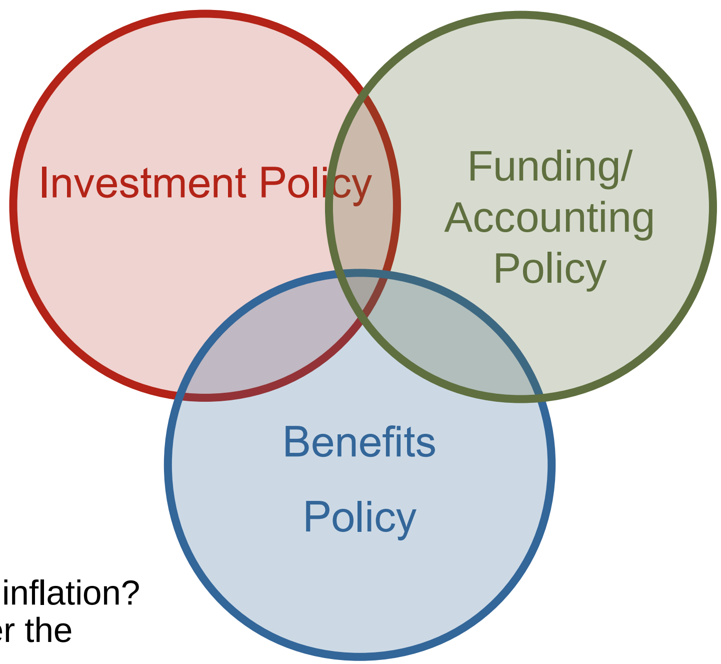
Process for Setting the Asset Allocation

Every 5 years the URS Board of Directors engages an external consultant to conduct an Asset/Liability Study. In that study, the consultant evaluates the interaction of the three key policies that govern a retirement plan with the goal of establishing the best investment policy.

Investment Policy
What are the risk and return objectives?
How to manage cash flows?
Permissible investments?
What are Plan liquidity needs?



Funding/Accounting Policy

Actuarial discount rate?
Actuarial methodology (amount of smoothing)?
How will the benefits be paid for (funded)?
How will deficits be paid for?
How will costs be recognized?

Benefits Policy
What type/kind of benefits?
How sensitive are benefits to inflation?
What liability measures matter the most?

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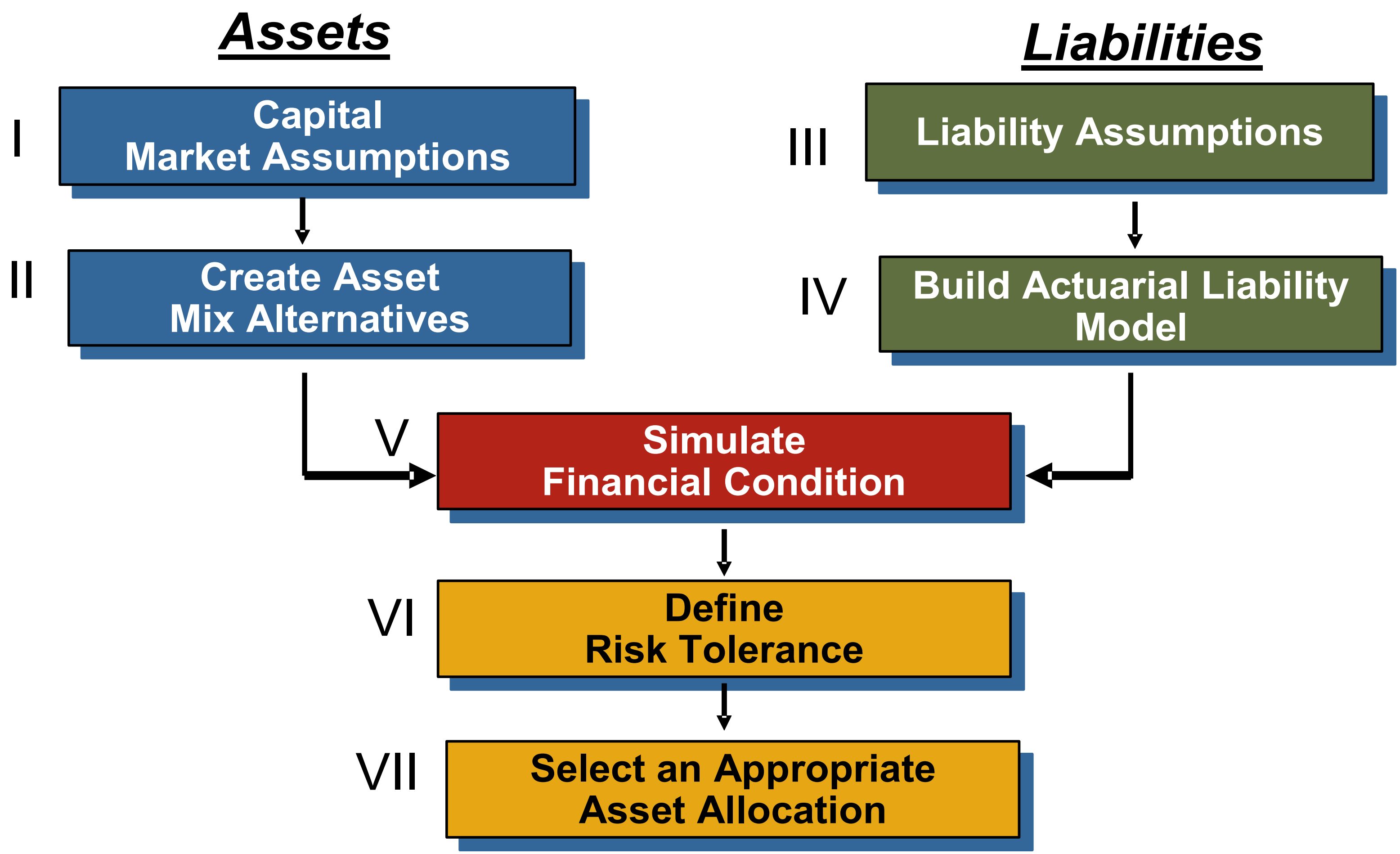
URS' optimal asset allocation is the result.



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Target Asset Allocation

±5%

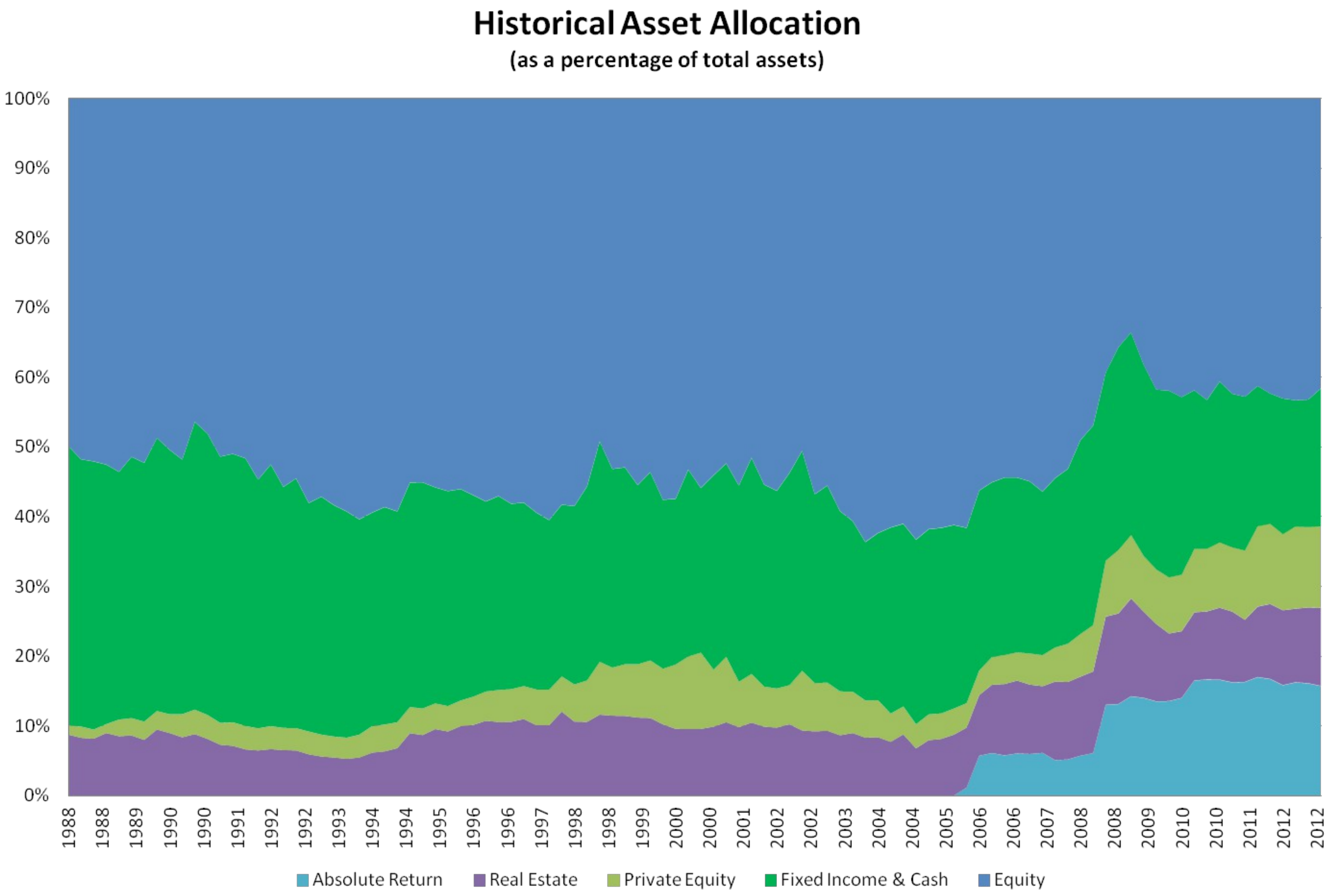
±6%

±4%

±4%

±6%

Historical Asset Allocation



Investment Philosophy of Asset Classes

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Asset Class	Role in Portfolio
Equity	Grow the assets of the pension fund over the long run. The equity portfolio is globally diversified and follows a Core-Satellite approach with the core being internally and externally managed in low-cost passive strategies to provide beta and the satellite comprising a handful of active managers who are exceptionally thoughtful in how they allocate capital to provide alpha.
Fixed Income	Generally provide protection in down equity markets, liquidity, and low correlation to other asset classes.
Private Equity	Produce returns in excess of public equity by being willing to invest with a long time horizon and accept illiquidity risk. The private equity portfolio targets 1/3 of its allocation to Venture Capital, 1/3 to Buyouts and 1/3 to Special Situations
Real Assets	Provide inflation protection to the portfolio as well as a differentiated source of return. Historically the portfolio has been predominately invested in private commercial real estate. Going forward additional investment types such as Private Energy, Timber and Agriculture are being added to the portfolio.
Absolute Return	Provide diversification to the overall plan by investing with managers who implement investment strategies that are fundamentally different than traditional long-only mandates. Produce returns over the long run that are in line with overall portfolio objectives.

URS Investment Process for Hiring & Terminating Managers

Take Action

Strategic & Tactical Planning

Rebalance or Exit

Scorecard

URS Investment Process for Rebalancing the Portfolio

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Set Target Allocations

- Long-Term Asset Class Allocations set by Board in Asset/Liability Study (every 5 years or so)
- Medium Term Sub Asset Class Allocations typically set by Strategic and Tactical Plans. (reviewed annually)
- Manager Allocations set by Investment Committee
- Short-term tactical allocations within approved ranges determined by CIO/Deputy CIO

Monitor Markets

- Macro/Economic Data
- Indexes
- News and Current Events
- Industry Research Reports
- Input from Managers
- Input from Consultants

Monitor Exposures

- Daily exposure report
- Cash & Liquidity Budgets

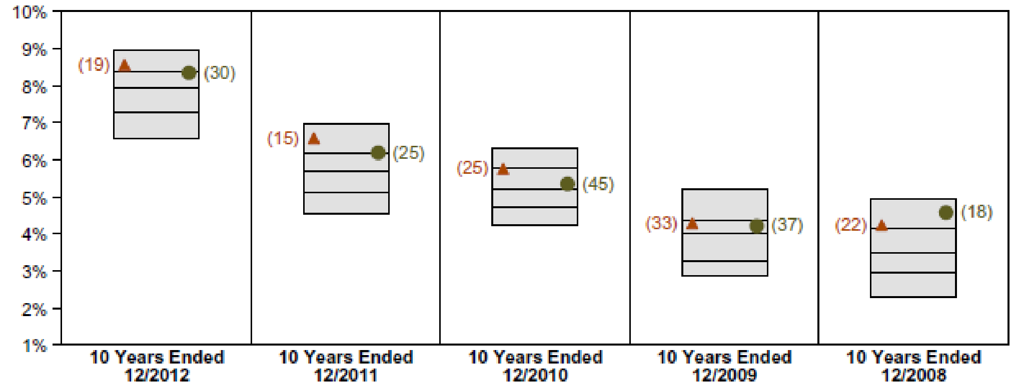
Trade

- Multiple reasons for trading: Manager changes, Systematic Rebalancing, participant cash flows, Tactical Opportunities, Fund Commitments (i.e. Private Equity, Real Assets), index changes, etc.
- Each time there is a need to trade, an assessment is done to figure out the most cost effective manner to get the desired exposure
- Pre-trade modeling to check compliance with policy targets and ensure adequate liquidity

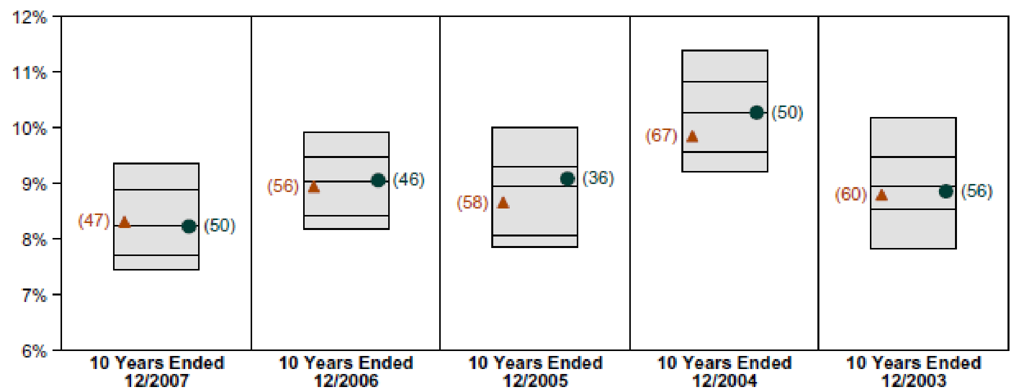
Review Performanc[illegible]

- Manager M[illegible] process (s[illegible]ous slide)
- Post-Trad[illegible]cution reviews
- Quarterly [illegible]n Reports
- Northern [illegible]rust reports for Inter[illegible]n repo[illegible]ting
- Albourne [illegible]
- And more

Rolling 10 Year Returns vs. Peer Group



	10 Years Ended 12/2012	10 Years Ended 12/2011	10 Years Ended 12/2010	10 Years Ended 12/2009	10 Years Ended 12/2008
10th Percentile	8.98	6.99	6.29	5.20	4.93
25th Percentile	8.40	6.20	5.76	4.36	4.17
Median	7.94	5.70	5.21	4.03	3.48
75th Percentile	7.30	5.12	4.74	3.26	2.97
90th Percentile	6.57	4.56	4.22	2.86	2.31
Total Fund ●	8.35	6.19	5.35	4.22	4.58
Policy Target ▲	8.57	6.59	5.76	4.29	4.24



	10 Years Ended 12/2007	10 Years Ended 12/2006	10 Years Ended 12/2005	10 Years Ended 12/2004	10 Years Ended 12/2003
10th Percentile	9.35	9.94	10.01	11.40	10.19
25th Percentile	8.91	9.48	9.32	10.85	9.48
Median	8.24	9.05	8.94	10.28	8.97
75th Percentile	7.71	8.42	8.07	9.57	8.54
90th Percentile	7.47	8.19	7.87	9.23	7.83
Total Fund ●	8.24	9.06	9.09	10.28	8.87
Policy Target ▲	8.32	8.95	8.67	9.86	8.81

*Current Quarter Target = 40.0% Russell Global, 18.0% 3-month Treasury Bill+5.0%, 13.0% NCREIF Total Index, 12.0% Barclays Aggregate Index, 8.0% Russell 3000 Index+3.5%, 5.0% World Gov Infl-Linked Hdg, 3.0% Barclays Global Aggregate and 1.0% Russell 3000 Index+2.0%.
Prior to 12/31/02 Private Equity target was 15% per year. All returns are annualized.
Source – Callan and Associates

Asset Class Returns

Rates of Return as of 12/31/2012	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Total Defined Benefit Plan	**13.10**	**9.75**	**2.96**	**8.38**
Policy Benchmark	12.23	9.17	3.63	8.57
Equity	**19.50**	**10.29**	**1.71**	**9.22**
Composite Equity Benchmark	17.74	8.58	0.49	8.36
Fixed Income	**6.73**	**7.80**	**6.90**	**6.12**
Fixed Income Benchmark	4.24	6.00	5.86	5.36
Private Equity	**13.17**	**14.27**	**6.18**	**13.50**
Russell 3000 + 3.5%	20.01	14.95	5.93	11.42
Real Assets/Real Estate	**8.94**	**12.26**	**-3.40**	**6.63**
NCREIF	10.54	12.63	2.13	8.44
Absolute Return	**6.62**	**6.2**	**4.04**	**-**
Cash + 5%	5.11	5.11	5.52	-

As the composition of the portfolio has changed over the years, the policy benchmarks at the overall portfolio level and within the portfolio have been updated to reflect target asset allocations as approved by the Board.

Current Quarter Target = 40.0% Russell Global, 18.0% 3-month Treasury Bill+5.0%, 13.0% NCREIF Total Index, 12.0% Barclays Aggregate Index, 8.0% Russell 3000 Index+3.5%, 5.0% World Gov Infl-Linked Hdg, 3.0% Barclays Global Aggregate and 1.0% Russell 3000 Index+2.0%.
Prior to 12/31/02 Private Equity target was 15% per year. All returns are annualized.
Source – Callan and Associates

- Domestic Equity Markets lost 38.5% in 2008. (S&P 500)
- International Equity Markets lost 45.1% in 2008. (MSCI EAFE)
- Emerging Equity Markets lost 54.5% in 2008. (MSCI Emerging Markets)
- High yield credit markets lost 26.2% in 2008. (Barclays High Yield Corporate)
- Long dated treasuries gained 22.7% due to a flight to quality in 2008. (Barclays Long Government)
- Liquidity was severely hampered in fixed income credit

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- By Q1 2008 we had rebalanced our Public Equity holdings to the lower end of the approved range.
- In Q2 2008 we recommended to the Board of Directors that we reduce the target asset allocation to equity and increase the allocation to Absolute Return. It was approved and we continued to bring down the exposure to public equities during that quarter.
- The Absolute Return portfolio declined approximately 14% in 2008. However, it had regained all of its losses within 14 months and

What We did Wrong During 2008 - 2009

- Real Estate lost 39.3% vs. its benchmark's loss of 22.2% during the 2008 – 2009 period
- Within the Real Estate portfolio our non-core real estate allocation which represented approximately 30% of the allocation to real estate lost 51.72% during that time due to the types of investments and leverage
- We were late in rebalancing from fixed income to equity in 2009. We should have rebalanced in Q4 of 2008 and again in Q1 of 2009, but it wasn't until Q3 2009 that we brought the equity allocation back to where it should be.

Going Forward

On a going forward basis we have made the following changes:

- Produced a liquidity balance sheet and budget to better manage the liquidity needs of the plan
- Reduced leverage and working to virtually eliminate the non-core part of our real estate portfolio
- Changed our fixed income ranges to produce greater flexibility in rebalancing
- Created a new allocation called Real Assets (see next slide for details)

Diversifying the Real Estate Portfolio

- Real Assets target is 13% of the total portfolio.
- Historically, Real Assets allocation has been weighted entirely to real estate.
- Going forward, Real Assets will be further diversified by decreasing real estate and increasing private energy, infrastructure, commodities timber, and agriculture.

Current Real Assets Portfolio
(As % of total portfolio)

Future Real Assets Portfolio
(As % of total portfolio)

Global Indexing in House

We have managed Passive Domestic Large Cap Equity portfolios internally for years. As we continue to look for way to cut costs and improve, we feel that it makes sense to expand our capability to manage Passive Global Equity Strategies.

To do this we hired an investment operations manager and are in the process of implementing new accounting and trading systems and are working to improve the way we approach trading and transacting in multiple currencies.

For several years we have been conducting an active dialog with the external asset managers whom we have hired on the topic of better aligning the interests of the managers with long-term investors such as URS.

These efforts have resulted in:

- Improved communication and transparency between the managers and ourselves.
- Lower management fees that the fund is paying.
- Longer time horizons over which managers